Memorandum

DATE: MARCH 22, 2001

TO: UST Managers, UST EFOMs, Compliance Inspectors

FROM: Lamar Bradley

RE: 1) Adding Additional Anodes to a Cathodically Protected Tank and

2) Adding Cathodic Protection to a Lined Tank

Questions have been asked recently regarding Division requirements whenever additional anodes are added to a cathodically protected UST system, and the addition of corrosion protection to a previously lined tank.

Adding Anodes to a Corrosion-Protected UST System

If tanks have been cathodically protected, and met the standards for new or upgraded tanks on December 22, 1999, but cathodic protection testing now indicates that additional CP is needed to achieve desired potential readings, an enhancement to the CP system will be allowed.

Adding anodes to a previously protected system is considered CP system maintenance. Rule 1200-1-15-.03(2) addresses CP system operation and maintenance. Parts 2 and 3 of paragraph 2 state: "The cathodic protection system shall be functioning as designed and is effectively preventing corrosion; and The owner and/or operator shall maintain records that demonstrate compliance with this paragraph…"

The CP system must be tested within six months after anodes have been added to assure that the CP system is functioning as designed and is effectively preventing corrosion.

The Division recommends that a UST systems tightness test be done within 3 to 6 months following the addition of anodes. Failure to do this tightness test is not a violation of the UST regulations.

Adding Corrosion Protection to a Previously Lined Tank

Tank owners may add CP to a previously lined tank to avoid manned entry into the tank to periodically inspect the lining. A December 4, 1995 EPA memo recommends UST integrity be assessed prior to adding CP. Integrity assessment may be done using invasive or non-invasive methods. Tennessee has also established a means of assessing tank integrity, the Tennessee Alternative Procedure (TAP), which utilizes a combination of pre- and post-construction tank tightness testing **and** monthly monitoring. If tank owners choose TAP to ensure the integrity of their UST system, **release detection by means of a monthly monitoring method is mandatory** for all systems assessed with TAP following addition of CP.

The EPA memo states "If the above criteria (described in the memo) are used, then internal lining is no longer considered the sole method of corrosion upgrade and periodic inspection of the lining is not required. If, however, cathodic protection is added to an UST whose integrity was not ensured, then periodic monitoring/ inspection of both the cathodic protection system and lining is required." This means, if an owner adds corrosion protection after a tank is lined and tank integrity is ensured prior to adding CP, no periodic inspection of the lining is required.

If a tank owner adds CP to a previously lined tank, the Division recommends that UST integrity be ensured BEFORE adding CP. This can be done by conducting an assessment of the tank using an invasive or non-invasive method or applying the TAP.

If tank integrity is ensured prior to adding CP, no periodic inspection of the lining is required. If tank integrity has NOT been ensured, periodic lining inspections will be required.

If CP has <u>already</u> been added to a previously lined tank and tank integrity was NOT ensured prior to adding CP, periodic lining inspections will be required until an assessment is done and UST integrity is ensured. After that is done, periodic lining inspections may be discontinued.